



## Board of Adjustment Case Report

City of Raleigh  
Department of City Planning  
One Exchange Plaza  
Raleigh, NC 27601  
(919) 996-2626  
[www.raleighnc.gov](http://www.raleighnc.gov)

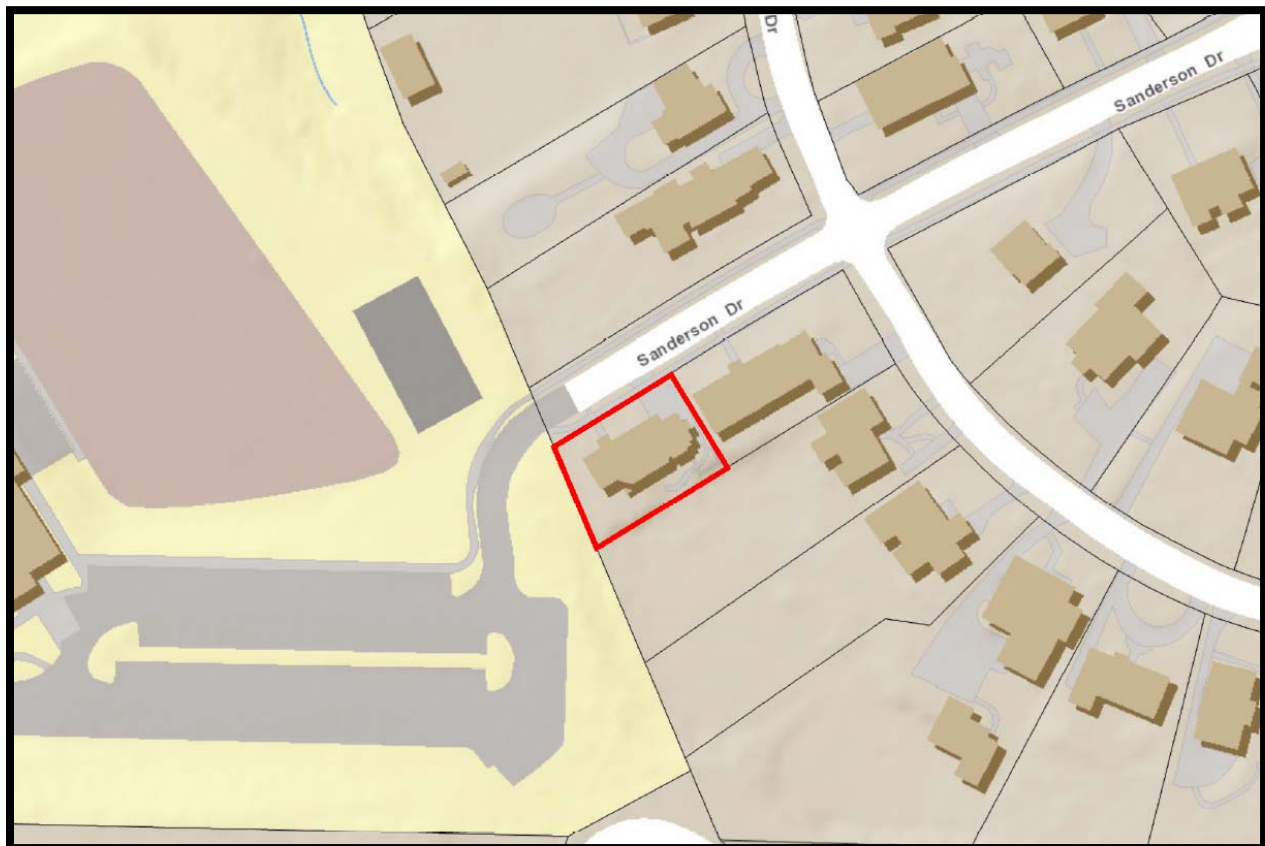
**Case File:** A-127-17

**Property Address:** 2605 Sanderson Drive

**Property Owner:** Henry and Ellen Campen

**Project Contact:** Jaime Schwedler

**Nature of Case:** A request for a special use permit to authorize the expansion of a nonconforming principal structure pursuant to Section 10.3.6.A.6. of the Unified Development Ordinance to permit an addition to the existing detached house, a portion of which is currently constructed over a stormwater drainage pipe on a .23 acre site zoned Residential-4 and located at 2605 Sanderson Drive.

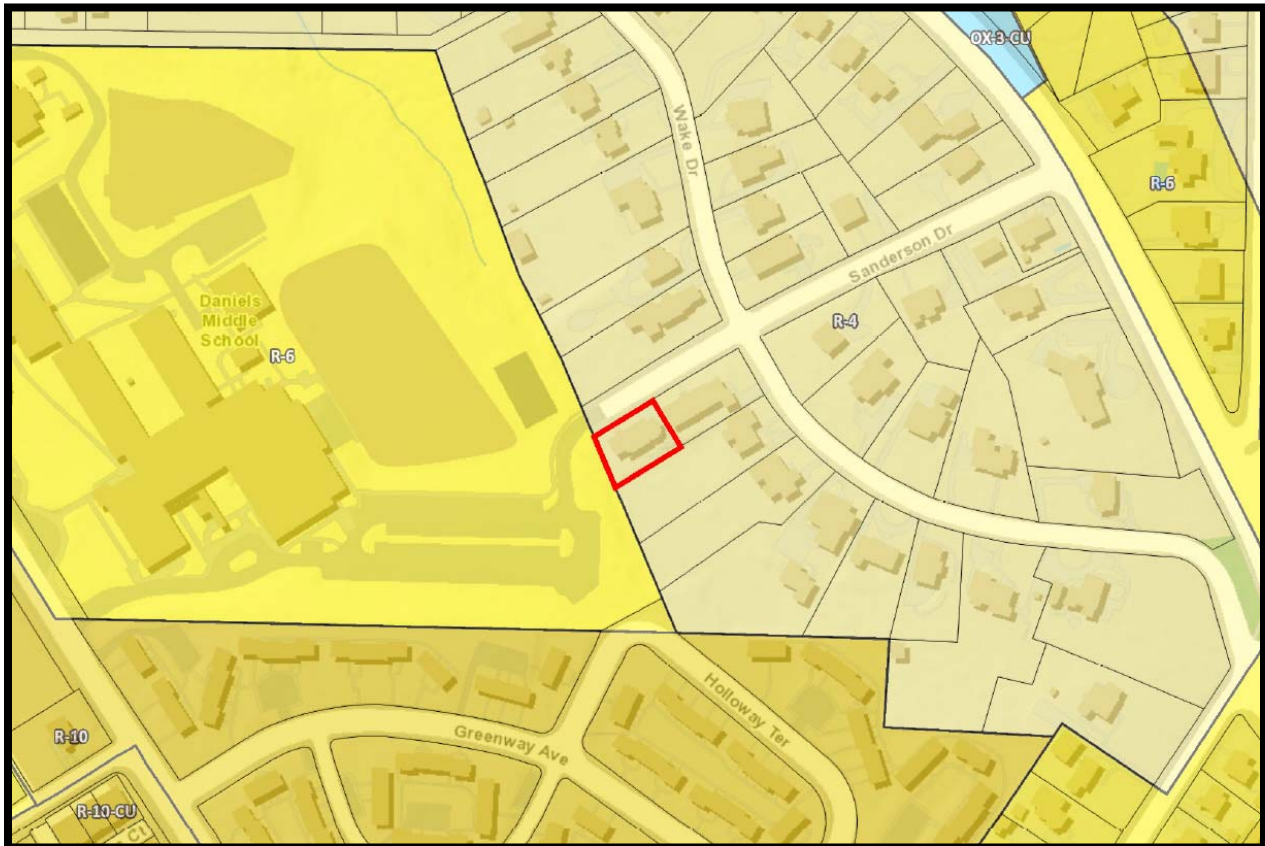


**2605 Sanderson Drive – Location Map**

To BOA: 11-13-17

Staff Coordinator: Eric S. Hodge, AICP

**ZONING  
DISTRICTS:** Residential-4



### 2605 Sanderson Drive – Zoning Map

**SHOWINGS:** In accordance with UDO §10.2.9 Special Use Permit, before a Special Use Permit request is granted, the Board of Adjustment shall show that all of the following are met:

1. The proposed use complies with all applicable provisions of this UDO unless otherwise expressly modified in accordance with this UDO;
2. The proposed use is allowed as a special use in the respective zoning district (see Chapter 6. Use Regulations);
3. The proposed use complies with any specific use standard listed in Chapter 6. Use Regulations without the granting of any variance to the specific use standard;
4. The proposed use is compatible with adjacent uses in terms of location, scale, site design, hours of operation and operating characteristics;

5. Any adverse impacts resulting from the proposed use in the affected area will be effectively mitigated or offset or the special use is denied;
6. Access with respect to pedestrian, bicycle and automotive safety, traffic flow and emergency service is adequate;
7. Signage is suitable and appropriate; and
8. Any appropriate dedications of streets and utilities to the public will be made prior to the issuance of a building permit.

**Zoning District Standards:** The subject property is zoned Residential-4

**R-4: Lot Dimensions**

Area (min)	10,000 SF
Width – interior lot (min)	65'
Width – corner lot (min)	80'
Depth -	100'

**R-4: Yard Type**                      **Minimum Setback**

Primary Street	20'
Side Street	15'
Side	10'
Sum of Sides	20'
Rear	30'



### Sec. 10.3.3. Nonconforming Principal Structures

#### A. Applicability

This section applies to all nonconforming principal structures and not to nonconforming accessory buildings, accessory structures, fences, signs, off-street parking, vehicular surface areas, private access points and outdoor lighting (see Sec. 10.3.4.).

#### B. Authority to Continue

Subject to the provisions of this Article or any amortization provision, any lawfully existing nonconforming structure may continue to occupy the same land area within the existing configuration and size of the structure which existed on the date the structure first became a nonconforming so long as it remains otherwise lawful.

#### C. Ordinary Repair and Maintenance

1. Normal maintenance and incidental repair or replacement, installation or relocation of non-bearing walls or non-bearing partitions, adding facilities to improve handicapped accessibility, energy conservation, painting, fencing and landscaping, wiring or plumbing, may be performed on any nonconforming structure; provided, however, that this paragraph shall not be deemed to authorize any violation of Sec. 10.3.3.C. through Sec. 10.3.3.F. Expenditures in any amount may be to either bring the nonconformity into full compliance with this UDO or to amortize the nonconformity.
2. Repairs maintenance and renovations to nonconforming residential buildings (detached house, attached house, townhouse and apartment) used exclusively for household living as set forth in Sec. 6.2.1. may be made in any amount and for any purpose except as restricted by Sec. 10.3.3.D. or Sec. 10.3.3.G.1. below.

#### D. Enlargement

Any nonconforming structure used for a conforming use may be enlarged or altered in any amount; provided, however, that no enlargement, maintenance, repair or alteration shall either create an additional nonconformity or increase the degree of the existing nonconformity of all or any part of such structure, and the enlargement or alteration complies with all requirements and regulations of this UDO.

#### E. Relocation

No nonconforming structure shall be relocated in whole or in part to any other location on the same or any other lot unless the entire structure conforms to the regulations of the district to which such structure is relocated.

#### F. Voluntary Demolition

Nothing shall be deemed to permit the reconstruction of any part of a nonconforming structure or building that has been voluntarily demolished except in full conformity with the provisions of the UDO.

#### G. Damage or Destruction

1. In the event that a nonconforming structure that is devoted in whole or in part to a conforming use is damaged or partially destroyed, by exercise of eminent domain, riot, fire, accident, explosion, flood, lightning, wind or other calamity or natural cause to the extent of more than 50% of the replacement cost of the structure immediately prior to such damage, such structure shall not be restored unless the structure and the use will conform to all regulations of the district in which the structure and use are located or unless a special use permit is issued by the Board of Adjustment for such restoration.
2. In the event that a nonconforming structure that is devoted in whole or in part to a conforming use is damaged or destroyed, by any means other than voluntary demolition, to the extent of 50% or less the replacement cost of the structure immediately prior to such damage, such structure may be repaired and reconstructed and used for the same purposes and degree as it was before the damage or destruction, provided that such repair or reconstruction is commenced with a valid building permit within 12 months of the date of such damage or destruction.
3. If the nonconforming structure is located within an Airport Overlay District, the following shall apply:
  - a. No renovation, maintenance or repair shall be made if the damage or destruction is more than 80% of its replacement cost immediately prior to such damage, unless the nonconformity is brought into compliance with this UDO; or



### Sec. 10.3.4. Nonconforming Site Elements

Subject to the provisions contained in this section and all other applicable provisions of this UDO, one or more of the following activities and improvements can be made to nonconforming accessory buildings, accessory structures, outdoor lighting, fences, walls, signs, off-street parking, vehicular surface areas and private access points. Improvements and activities that are not explicitly authorized by in this section are not allowed. The following allowed activities and improvements can be initiated without the issuance of a special use permit by the Board of Adjustment.

#### A. Renovation, Ordinary Maintenance and Repair

1. The cost of renovation and ordinary maintenance and repair to any nonconforming accessory building, accessory structure, fence, walls, vehicular surface area, private access point and outdoor lighting shall not during any 1 calendar year exceeds 15% of the tax value of the zoning nonconforming site element in the county where the property is located, or the original cost of the nonconforming site element if there is no listed tax value.
2. The limitation on expenditures established here does not apply to Sec. 10.3.4.B. through Sec. 10.3.4.G. below.
3. Ordinary maintenance and repair shall be limited to work necessary to maintain and correct any damage, other than caused by casualty, or deterioration to the structural soundness or features of an accessory building, accessory structure, fence, vehicular surface area, private access point or outdoor lighting.
4. For damage to any nonconformity that is caused by any casualty, the provisions of Sec. 10.3.4.B. below apply in lieu of this provision.
5. The regulations for ordinary maintenance and repair of nonconforming signs are set forth in Sec. 7.3-47.

#### B. Casualties

The rebuilding, reconstruction or restoring of any nonconforming accessory building, accessory structure, fence, walls, vehicular surface area, private access point and outdoor lighting which was damaged or partially destroyed by a casualty, which includes the exercise of eminent domain, riot, fire, accident, explosion, lightning, flood, wind or other calamity or natural act, is allowed provided all of the following conditions are met:

- b. A special use permit is issued by the Board of Adjustment for such restoration and the restoration does not create a greater hazard to navigation than the previously existing nonconformity.
4. Replacement cost shall be determined by either:
    - a. The most recent edition of Building Construction Cost Data published by R.S. Means; or
    - b. The most recent tax value for building as reported in the county tax office where the property is located. The property owner shall decide which of the 2 methods for determining replacement cost is to be used.
  5. The percentage of damage shall be calculated by using the selected replacement value of the entire structure as the denominator and by using the selected replacement value of the damaged portion of the structure as the numerator. The same method used to determine replacement value for the denominator must be used.
  6. Nothing in this paragraph shall prevent the rebuilding, reconstruction or restoration of the same structure because such structure fails to conform to the standards of a Neighborhood Conservation Overlay District.

#### H. Replacement of Manufactured Homes

Replacement of nonconforming manufactured homes that fail to meet the minimum standards of the National Manufactured Home Construction and Safety Standards shall be permitted, provided that all of the following are met:

1. The replacement manufactured home meets the current minimum required standards as prescribed by the United States Department of Housing and Urban Development (HUD).
2. The newly installed manufactured home, if located in a flood prone area, complies with the provisions of Article 9.3. *Floodprone Area Regulations*.
3. That the period of time between the time the nonconforming manufactured home is removed and the time it is replaced with a standard manufactured home is less than 365 days.
4. The number of manufactured homes is not increased.
5. The floor area gross of the new manufactured home does not exceed the floor area gross of the manufactured home it replaced by more than 25%.

1. The cost of rebuilding, reconstructing and restoring the nonconforming site element is less than 50% of either its listed property tax value of the nonconforming site element in the county where the property is located or, if there is no listed property tax value, the original cost of the nonconforming site element.

2. The nature and degree of the nonconformity is not expanded, extended or increased from that which existed prior to the damage or destruction, nor is it altered or changed except as otherwise allowed as a renovation in Sec. 10.3.4.A. above.

a. Reconstruction and repair is commenced with a valid building permit within 12 months of the date of such damage or destruction.

b. If the cost of the rebuilding, reconstruction or restoration will be 50% or more of either the listed property tax value of the nonconforming site element in the county where the property is located or if there is no listed property tax value the original cost of the nonconforming site element, the nonconforming accessory building, accessory structure, fence, vehicular surface area, private access point or outdoor lighting shall not be rebuilt, reconstructed or restored except in compliance with this UDO.

#### C. Expansions

Additions to the number of off-street parking spaces and expansions to vehicular surface areas shall be governed by Article 7.1. *Parking*. In addition, expansions to vehicular surface areas to serve any zoning nonconforming use shall in addition to these standards be subject to all the requirements of Sec. 10.3.6.A.3.

#### D. Resumptions

Any nonconforming accessory building, accessory structure, sign, vehicular surface area, private access point or outdoor lighting, which is discontinued, unused or unoccupied for a continuous period of 365 days or more may not be restarted, resumed or reoccupied.

#### E. Substitution of Impervious Surfaces

Substitution of impervious surfaces for 1 use, facility, building or structure, vehicular surface area or access point to another provided all of the following are met:

1. The amount and extent of impervious surfaces is not increased.

2. The placement of those new impervious surfaces conforms to the requirements of this UDO.

3. The impervious surface is for a lawful activity.

#### F. Zoning Nonconformities Brought Into Compliance

Expenditures to bring any nonconforming accessory building, accessory structure, fence, wall, sign, off-street parking, vehicular surface areas, private access point or outdoor lighting into full compliance with the City Code are allowed in any amount. The owner may secure any permit or approval and make any alteration that will bring the zoning nonconformity into full compliance.

#### G. Amortizing a Nonconformity

Expenditures required by this UDO to remove a nonconforming site element or bring it into conformity with the UDO are permitted in any amount.

### Sec. 10.3.5. Nonconforming Lots of Record

#### A. Authority to use For Single-Unit Living

In any district in which a single-unit living detached house is allowed as a permitted use, notwithstanding the regulations imposed by any other provisions of this UDO, a single-unit living detached house which complies with the restrictions of Sec. 10.3.5.B. below may be erected on a nonconforming lot that:

1. Has less than the prescribed minimum lot area or width; and
2. Is shown by a recorded plan or deed to have been a lot of record owned separately and individually from adjoining tracts of land at a time when the creation of a lot or tract of such area and depth at such location would not have been prohibited by any zoning or other ordinance.

#### B. Regulations for Single-Family Use of Nonconforming Lots

A nonconforming lot authorized to be used pursuant to Sec. 10.3.5.A. above may be used for a single-unit living detached house and permitted accessory uses and structures. Construction of the single-unit living detached house shall comply with all the regulations, except lot area or width, applicable to the detached house in the district in which the lot is located, unless a variance is granted pursuant to Sec. 10.2.10.



### Sec. 10.3.6. Special Use Permits for Nonconformities

#### A. Special Use Permit Required

All special use permits authorized in this section shall be processed, noticed and heard in accordance with Sec. 10.2.9. After the issuance of a special use permit by the Board of Adjustment in accordance with Sec. 10.3.6.B., one or more of the following activities can be made to a zoning nonconformity.

1. Repair and maintenance work not authorized by either Sec. 10.3.2.B. or Sec. 10.3.3.C.
2. Fixing and replacing damage and destruction authorized by Sec. 10.3.2.G.1. and Sec. 10.3.2.G.3. and by Sec. 10.3.3.G.1. and Sec. 10.3.3.G.3.b.
3. The expansion, extension or alteration of a nonconforming use or vehicular surfaces serving a nonconforming use (including nonconforming principal use parking facilities) when all of the following are met:
  - a. The expansion, extension or alteration complies with all requirements of this UDO including but not limited to: height, bulk, setback, off-street parking, impervious surface coverage and access.
  - b. The expansion, of a nonconforming use does not, singularly or collectively, exceed 25% of the total gross area occupied by the original nonconforming use. If the original nonconforming use occupied a portion of a building and that building has not been enlarged since the establishment of the nonconformity, that original nonconforming use may be extended beyond 25% within the interior portions of the building.

4. The change of an existing nonconforming use to another nonconforming use provided that all of the following are met:

- a. The use will have no greater adverse effect on the surrounding property in terms of automobile or truck traffic, on-street parking, noise, stormwater, vibration and hours of nighttime operation than the existing use.
- b. Any change to a limited use or special use complies with a applicable requirements of Chapter 6. *Use Regulations*.
- c. The proposed substitute nonconforming use is allowed in the zoning district of the highest classification in which the existing nonconforming

use would be a conforming use. The determination of the classification of the use shall be based on Planning and Development Officer.

- d. Once a nonconforming use is changed to a higher classification, it may not thereafter be changed to a nonconforming use of a lower classification, including a change back to the original nonconforming use.
- e. The substitution of a nonconforming impervious surface for another, the replacement of a substandard nonconforming manufactured home and the change of use of a nonconforming use to a conforming use may all be done without a special use permit from the Board of Adjustment if the applicable provisions of Sec. 10.3.4.E., Sec. 10.3.3.H., Sec. 10.3.3.C.1. and Sec. 10.3.2.B. are met.
5. The relocation onto its same premise of either a nonconformity or a nonconforming private access point, is allowed; provided the relocation reduces the extent of the nonconformity and more closely conforms to the standards contained in this UDO.
6. The enlargement or alteration of any nonconforming structure used for a conforming use that creates an additional nonconformity or increases the degree of the existing nonconformity is allowed provided the enlargement or alteration of all or any part of such structure, does not exceed, singularly or collectively, 25% of the floor area gross of the original nonconforming structure, and the enlargement or alteration complies with all other requirements and regulations of this UDO.

#### B. Showings for Granting Special Use Permit for Nonconformities

1. Before a request for the special use permit is granted, the Board of Adjustment must show that all of the following are met:
  - a. The applicable standards of this section have been met;
  - b. All of the showings of Sec. 10.2.9.E. have been met; and
  - c. The requested repair, reconstruction, expansion, change of use to a different nonconforming use or relocation will not be injurious to property or improvements in the affected area.
2. In acting upon a petition for a special use permit, the Board cannot order the discontinuance or termination of the nonconformity.
3. If a special use petition is denied, the continuation of the nonconformity and the activities allowed in Sec. 10.2.2. and Sec. 10.2.3. without a special



CHAPTER 10. ADMINISTRATION | Article 10.3. Nonconformities  
Sec. 10.3.6. Special Use Permits for Nonconformities

use permit is still allowed unless otherwise prohibited by law. This policy is adopted to encourage the owners of nonconformities to apply for special use permits to improve and bring into conformance to the extent possible their property.



# Special Use Permit Application

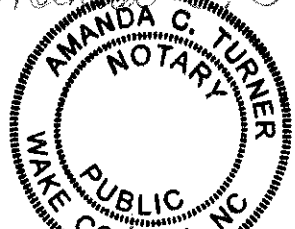


**RALEIGH**  
DEPARTMENT OF  
CITY PLANNING



Department of City Planning | 1 Exchange Plaza, Suite 300 | Raleigh, NC 27601 | 919-996-2626

Nature of request (Submit addendum on separate sheet, if more space is needed.) See Addendum	OFFICE USE ONLY
	Transaction Number  A-127-17
Provide all previous transaction numbers for Coordinated Team Reviews, Due Diligence Sessions or Pre-Submittal Conferences. If this property was the subject of a previous special use permit request, provide the case number. Department of City Planning transaction #520486	

GENERAL INFORMATION		
Property Address 2605 Sanderson Drive		Date 10-13-2017
Property PIN 1705214025	Current Zoning R-4	
Nearest Intersection Sanderson Drive and Wake Drive	Property size (in acres) .23	
Property Owner Henry C. Campen Jr., Ellen B. Campen	Phone 919-890-4145	Fax 919-834-4564
Owner's Mailing Address 2605 Sanderson Drive, Raleigh, NC 27608		
Email henrycampen@parkerpoe.com		
Project Contact Person Jamie Schwedler	Phone 919-835-4529	Fax 919-834-4564
Contact's Mailing Address P.O. Box 389, Raleigh, North Carolina, 27602		
Email jamieschwedler@parkerpoe.com		
Property Owner Signature <i>Henry C. Campen Jr.</i> <i>Ellen B. Campen</i>		
Notary  Sworn and subscribed before me this <u>13<sup>th</sup></u> day of <u>October</u> , 20 <u>17</u>	Notary Signature and Seal <i>Amanda C. Turner</i>  my comm. expires: 6/26/2020	

It is improper to contact any member of the Board of Adjustment prior to the disposition of a case to discuss the request. A Special Use Permit Application will not be considered complete until all required submittal components listed on the Special Use Permit Checklist have been received and approved.



**Nature of Special Use Permit Request**  
**2605 Sanderson Drive (PIN 1705214025)**

Applicants Henry and Ellen Campen ("the Campens") seek a building permit to construct a 232-square-foot addition to their home, which was built on top of an unrecorded 42" reinforced concrete stormwater pipe (the "Pipe"). The home is an existing nonconforming structure because the Pipe was not placed in a drainage easement when it was laid, as is now required by Stormwater Design Manual § 1.2.3 (incorporated into the UDO in § 9.2.1.B). In order to obtain the building permit for the expansion, the Campens seek a Special Use Permit ("SUP") under UDO § 10.3.6(A)(6) to authorize the expansion of a nonconforming principal structure. The expansion meets all the criteria as explained below.

**1. The applicable standards of UDO § 10.3.6.(A)(6) have been met.**

UDO § 10.3.6.(A)(6) permits the enlargement of any nonconforming principal structure used for a conforming use that increases the degree of the existing nonconformity if the enlargement does not exceed 25% of the floor area gross of the original nonconforming structure, and the enlargement complies with all other requirements and regulations of the UDO.

The Pipe was laid in 1958 across several lots including residential Lot 32, and no easement was recorded. In 1991, Lot 32 was subdivided into Lots 32A and 32B, with the Pipe running beneath Lot 32B. The City then issued a building permit for a home on Lot 32B, and the home was built directly on top of the Pipe. In 1992, the Campens purchased Lot 32B with no knowledge of the Pipe. The house is a nonconforming structure because the City allowed it to be built over the Pipe, but it has a conforming residential use for the R-4 district. The house is being expanded by 232 square feet, which is 6.8% of the 3,388 square feet floor area gross of the house, and thus does not exceed the 25% expansion requirement.

The expansion also conforms with other requirements and regulations of the UDO, such as the setback requirements in UDO § 1.5.4. The elevations and detailed site plan show that the expansion contains a 6'-4" cantilever extending approximately 3' into side setback, which is a permissible setback encroachment per UDO § 1.5.4(D)(1)(g)(allowing bay windows and similar features to encroach up to 4' into setback if less than 10' wide). The expansion does not affect the build-to requirements for the front façade of the house under UDO § 1.5.6, and meets the height requirements of UDO § 1.5.7.

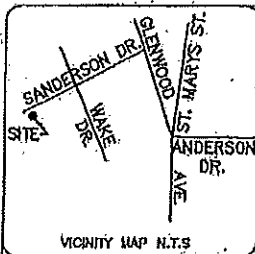
**2. All of the showings of UDO § 10.2.9.E are satisfied.**

The Campens' home is a residential structure, which is a permitted use in the R-4 district. The proposed expansion will not change the use of the structure, meaning criteria #1-5 in UDO § 10.2.9.E have all been met or do not apply. Further, criteria #6-8 are satisfied because the expansion of the home within the lot will not affect pedestrian or automotive traffic, does not involve signage, and no dedication of any streets or utilities to the City is necessary.

**3. The requested expansion will not be injurious to property or improvements in the affected area.**

The Campens are merely expanding their home by 232 square feet. This addition is not located over the Pipe and is instead over 9' from the Pipe at the closest point, and over 12' from the Pipe at its furthest point. Allowing an expansion in an area that is not over the Pipe, a portion of which is cantilevered, will not affect the Pipe itself nor the ability to maintain it. The Pipe is structurally sound, as indicated by both the attached 1997 Law Engineering and Environmental Services, Inc. report and the 2017 A.B.E. Utilities report. There is no indication that expansion in the proposed area will impact the Pipe.

Further evidence that the expansion will not be injurious to the property in the surrounding area will be presented during the hearing.



PLAN INFORMATION BLOCK		
Footprint: 232 S.F.	Total Square Feet:	
Crow:	Slab:	Basement:
Mean Height:	Stories:	
Facade:		
Impervious Surface Area: 4767 S.F./48%		

ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH ALL CITY OF RALEIGH AND NC DOT STANDARDS AND SPECIFICATIONS

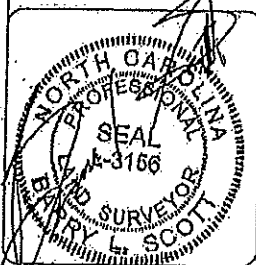
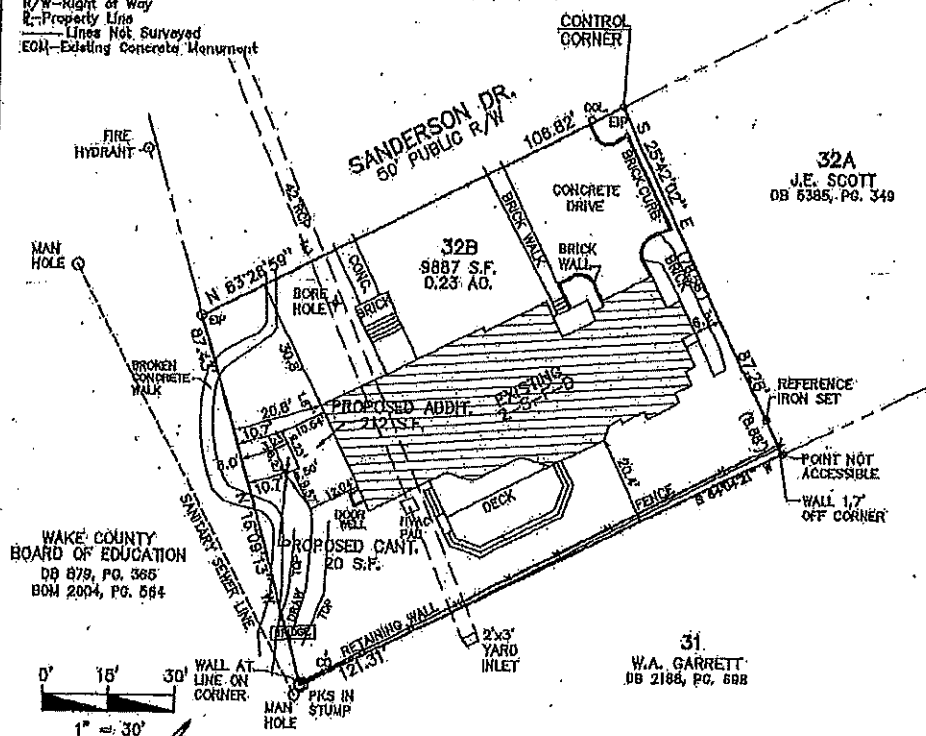
THE SURVEYOR DOES NOT WARRANT THE ACCURACY OF ARCHITECTURAL DIMENSIONS. THEY ARE TO BE VERIFIED BY THE CONTRACTOR.

#### LEGEND

IPS-Iron Pin Set  
EIP-Existing Iron Pin  
PKS-Parker-Kalon Nail Set  
EPK-Existing Parker-Kalon Nail  
PP-Power Pole  
OHP-Over Head Power  
C-Center Line  
R/W-Right of Way  
P-Property Line  
---Lines Not Surveyed  
EOM-Existing Concrete Monument

EXISTING IMPERVIOUS SURFACE: 4535 S.F.  
PROPOSED IMPERVIOUS SURFACE: 232 S.F.  
TOTAL IMPERVIOUS SURFACE: 4767 S.F.  
OR 48% OF TOTAL AREA

232 S.F. INCREASE IN IMPERVIOUS SURFACE



8-22-2017

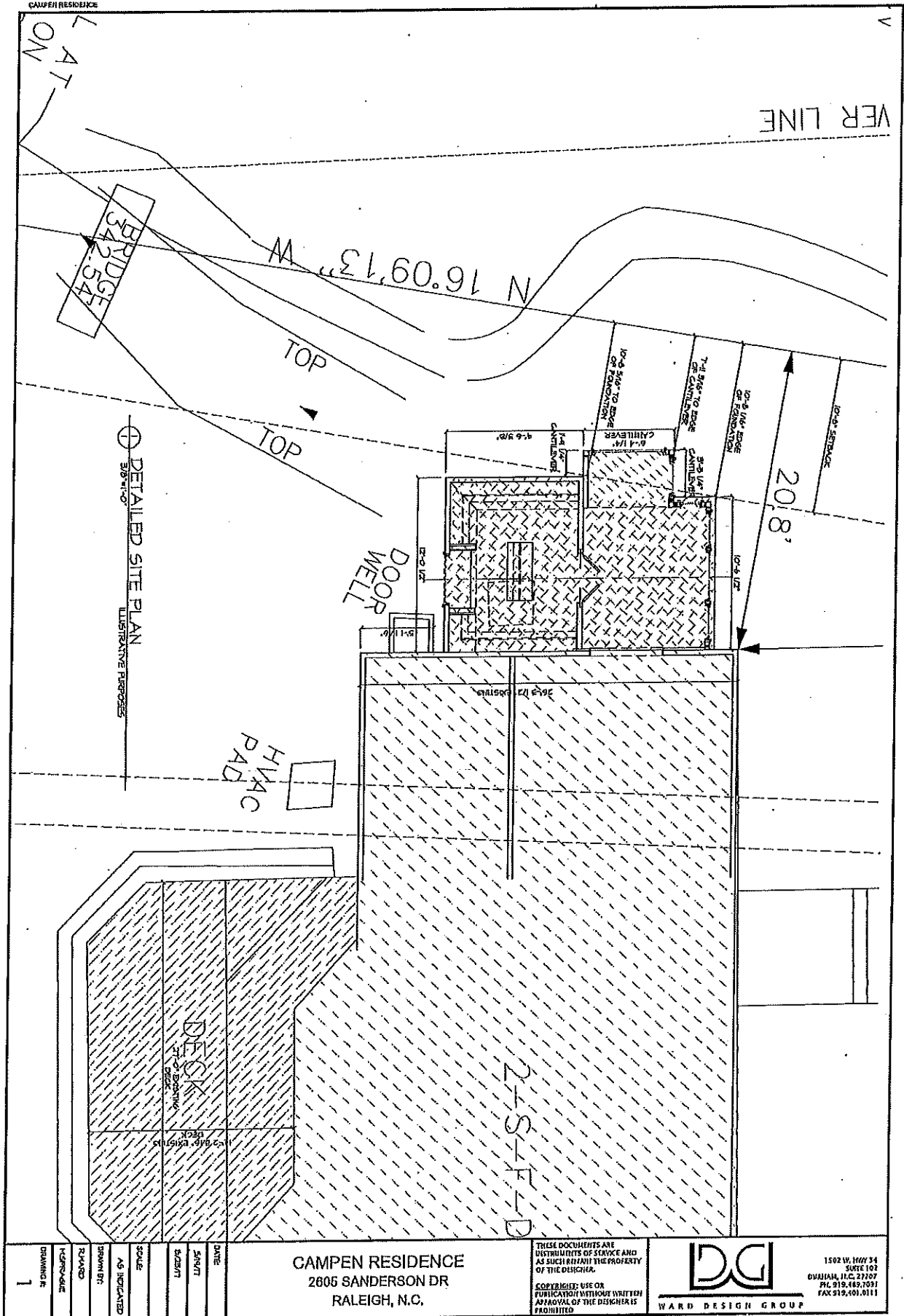
PIN#: 1705214025 TOWNSHIP: RALEIGH ZONE: R-4  
LOT 32B, VICTORIA M DIAB ESTATE  
AS RECORDED IN BOM 1991, PAGE 946 W.C.R.

I, Barry L. Scott, certify that this plot was drawn under my supervision from an actual survey made under my supervision (deed description recorded in Book 5845, page 804, etc.) (other), that the ratio of precision as calculated by latitude and departure is 1/10,000, that the boundaries not surveyed are shown as broken lines plotted from information found in (SEE REFERENCE). Witness my original signature, registration number and seal this 22nd day of August, A.D. 2017.

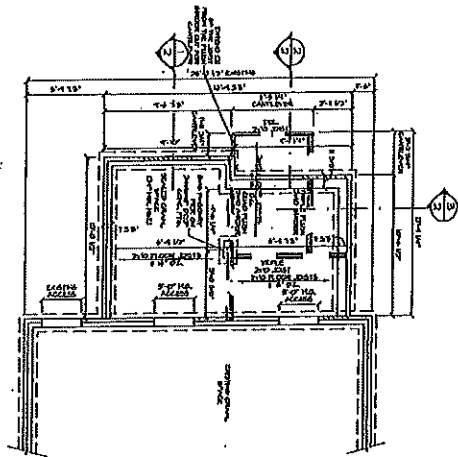
PROPERTY OF HENRY C. CAMPEN, Jr. ELLEN B. CAMPEN		
2805 SANDERSON DR WAKE COUNTY RALEIGH, N.C.		
SCALE: 1" = 30'		
DATE: 8-22-17		
BOOK: M555/61		



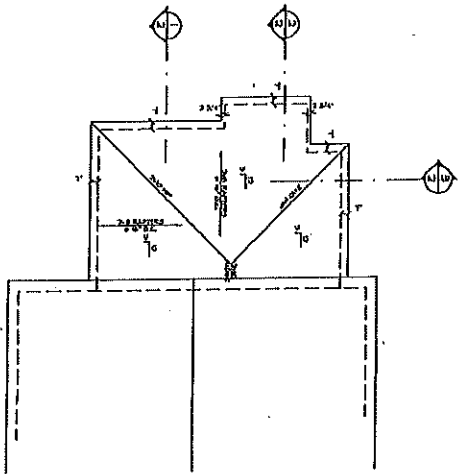
CAMPEN RESIDENCE



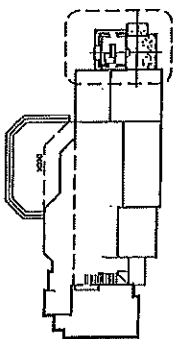
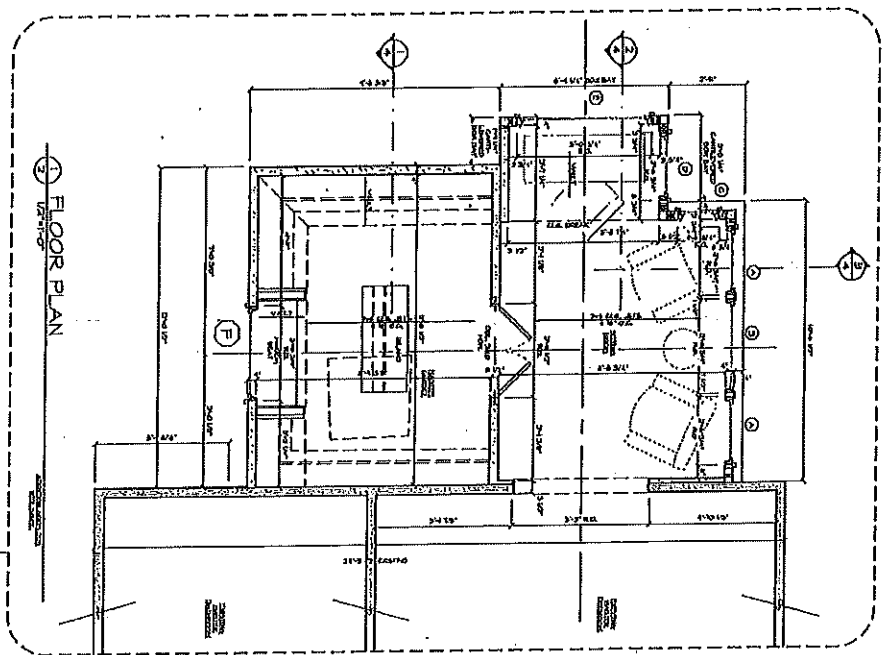
FOUNDATION PLAN



ROOF PLAN



FLOOR PLAN



DATE	
SCALE	AS INDICATED
DRAWN BY	RDW
CHECKED BY	
DATE	
PROJECT	
DESCRIPTION	
REVISIONS	
DATE	
BY	
REASON	

CAMPEN RESIDENCE  
2605 SANDERSON DR  
RALEIGH, N.C.

THESE DOCUMENTS ARE  
INSTRUMENTS OF SERVICE AND  
AS SUCH REMAIN THE PROPERTY  
OF THE DESIGNER.  
COPYRIGHT: USE OR  
PUBLICATION WITHOUT WRITTEN  
APPROVAL OF THE DESIGNER IS  
PROHIBITED

**WDG**

1508 W. 800Y ST  
SUITE 102  
DURHAM, N.C. 27707  
PH: 919.489.7921  
FAX: 919.481.0111

WARD DESIGN GROUP

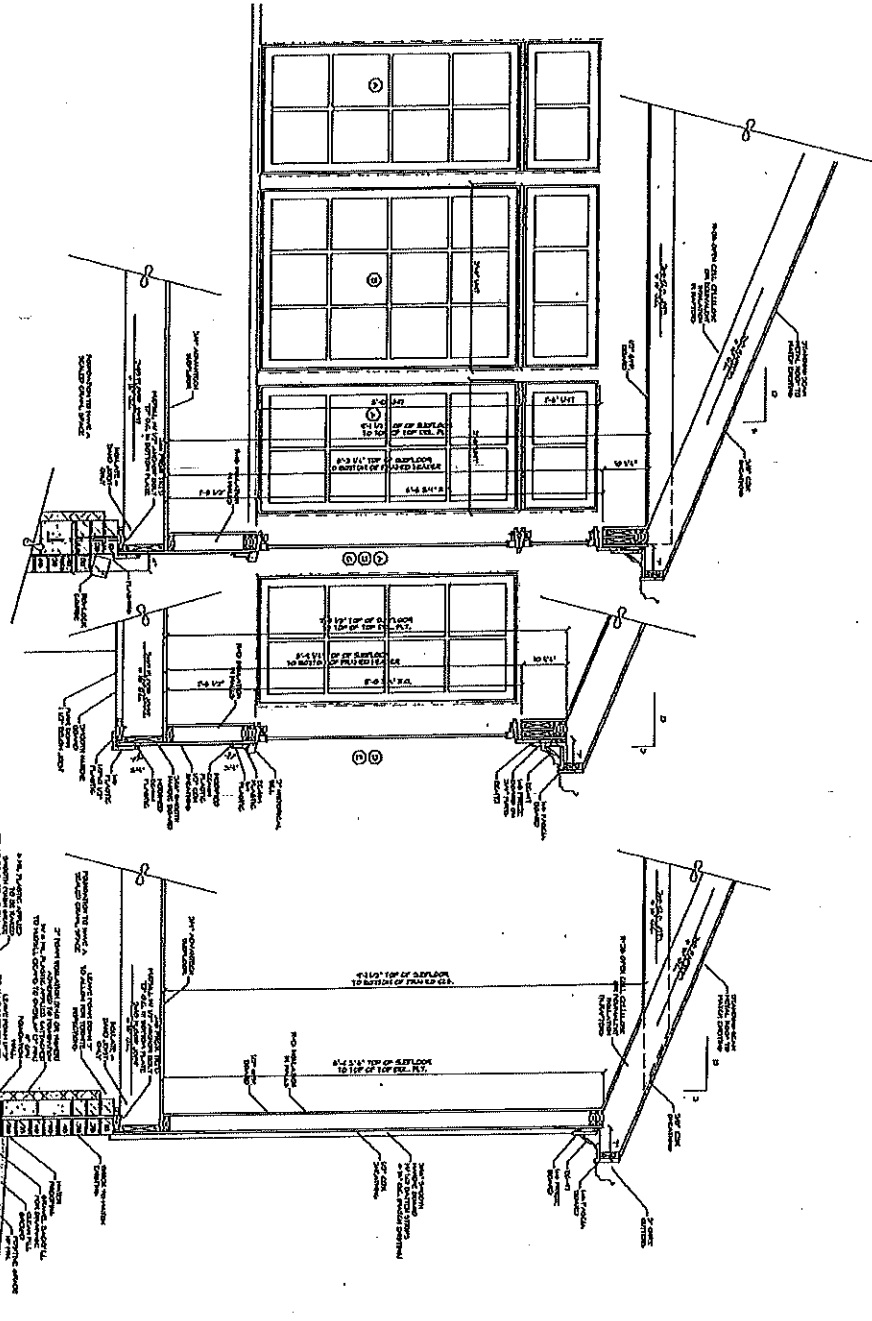
WINDOW SCHEDULE											
NO.	LOC.	LOCATION	W.C. & F.S. LISTED	DESCRIPTION	LITES	ROUGH OPENING	HDR. HGT.	TRIM	MAINTN	FINISHES	NOTES
A	2	MASTER BEDROOM SITTING ROOM	EMC3060 W/ ABV	FXD 2-6X5-0 CASSEMENT UNIT W/ 2-6X1-6 TRANSOM UNIT MULLED TIGHT	2W/1H OVER 2W/4H	2-6 3/4X6-6 3/4	8'-3 1/4"	FIELD APPLIED	7/8"	4 9/16"	TEMPERED; SEND 2" HISTORIC SILL LOOSE;
B	1	MASTER BEDROOM SITTING ROOM	EMC4260 W/ ABV	FXD 3-6X5-0 CASSEMENT UNIT W/ 3-6X1-6 TRANSOM UNIT MULLED TIGHT	3W/1H OVER 3W/4H	3-6 3/4X6-6 3/4	8'-3 1/4"	FIELD APPLIED	7/8"	4 9/16"	TEMPERED; SEND 2" HISTORIC SILL LOOSE;
C	1	MASTER BEDROOM SITTING ROOM	EMC1860 W/ ABV	FXD 1-6X5-0 CASSEMENT UNIT W/ 1-6X1-6 TRANSOM UNIT MULLED TIGHT	1W/1H OVER 1W/4H	1-6 3/4X6-6 3/4	8'-3 1/4"	FIELD APPLIED	7/8"	4 9/16"	TEMPERED; SEND 2" HISTORIC SILL LOOSE;
D	1	MASTER BEDROOM SITTING ROOM	EMC3060	FXD 2-6X5-0 CASSEMENT UNIT	2W/4H	2-6 3/4X5-6 3/4	6'-9 1/4"	FIELD APPLIED	7/8"	4 9/16"	TEMPERED;
E	1	MASTER BEDROOM SITTING ROOM	EMC5060	FXD 5-6X5-0 CASSEMENT UNIT	5W/4H	5-0 3/4X5-0 3/4	6'-9 1/4"	FIELD APPLIED	7/8"	4 9/16"	TEMPERED
F	1	MASTER BEDROOM CLOSET	EMC4260	FXD 3-6X5-0 CASSEMENT UNIT	3W/4H	3-6 3/4X5-0 3/4	6'-9 1/4"	2" B.M.	7/8"	4 9/16"	



② MASTER SITTING ROOM SECTION

② MASTER SITTING ROOM SECTION

① MASTER CLOSET SECTION



CAMPEN RESIDENCE  
2605 SANDERSON DR  
RALEIGH, N.C.

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PROHIBITED

**DCG**  
WARD DESIGN GROUP

1502 W. HAY ST.  
SUITE 102  
DURHAM, N.C. 27707  
TEL 919.469.7051  
FAX 919.461.0111

DATE	
SHEET	
6/2/07	
SCALE	
AS INDICATED	
DRAWN BY	
CHECKED	
15/06/06	
DRWING	



### Project Information

Surveyor Name	Mr. "Q"	Certificate Number	U-1214-06023016
Owner		Customer	Henry Campen
Drainage Area		PO Number	
Pipe Segment Reference		Date	3/16/2017 11:35
Street	2605 Sanderson Rd	City	Raleigh, NC
Comments			

### Manhole

Upstream MH	Inlet behind house	Rim to Invert (U)	
Grade to Invert (U)		Rim to Grade (U)	
Downstream MH	Front Yard MH	Rim to Invert (D)	
Grade to Invert (D)		Rim to Grade (D)	
Sewer Use	Stormwater	Direction of Survey	Upstream

### Pipe

Height (Diameter)	42	Width	0
Shape	Barrel	Material	Reinforced Concrete Pipe
Lining Method		Pipe Joint Length	
Total Length		Length Surveyed	79.6
Year Laid		Year Renewed	

### Misc

Flow Control	Not Controlled	Media Label	DVD
Purpose	Routine Assessment	Sewer Category	
Pre-Cleaning	No Pre-Cleaning	Date Cleaned	
Weather	Dry	Location Code	Yard
Additional Info		Location Details	

### Custom

Number of Taps	0	Number of Roots	0
Num Cracks / Fractures	0	Number of Broken / Holes / Collapse	0
Number of Deposits	0	Custom6	
Custom7		Struct Grade	
OM Grade		Overall Grade	

### Pacp 6

Reverse Setup ID		Sheet (Group) Number	
Imperial Units (US)	True	Pressure Value	
Work Order		Project	2605 Sanderson Rd
		Completed	Yes



# Project: 2605 Sanderson Rd

Date: 3/16/2017 11:35:00 AM

Street: 2605 Sanderson Rd

Length Surveyed: 79.6

Pap Quick Overall Rating: 0000

Height (Diameter): 42

Street: 2605 Sanderson Rd

Pipe Segment Reference:

Upstream MH: Inlet behind house

Downstream MH: Front Yard MH

Direction of Survey: Upstream

Material: Reinforced Concrete Pipe

Distance	Fault Observation	Time	Picture
0.0	Manhole Severity: None Remarks: Front Yard MH	30	
0.0	Water Level Severity: None Percent: 5	43	
79.6	Manhole Severity: None Remarks: Inlet behind house	02:39	

## Project: 2605 Sanderson Rd

Date: 3/16/2017 11:35:00 AM

Street: 2605 Sanderson Rd

Length Surveyed: 79.6

Pacp Quick Overall Rating: 0000

Height (Diameter): 42

Street: 2605 Sanderson Rd

Pipe Segment Reference:

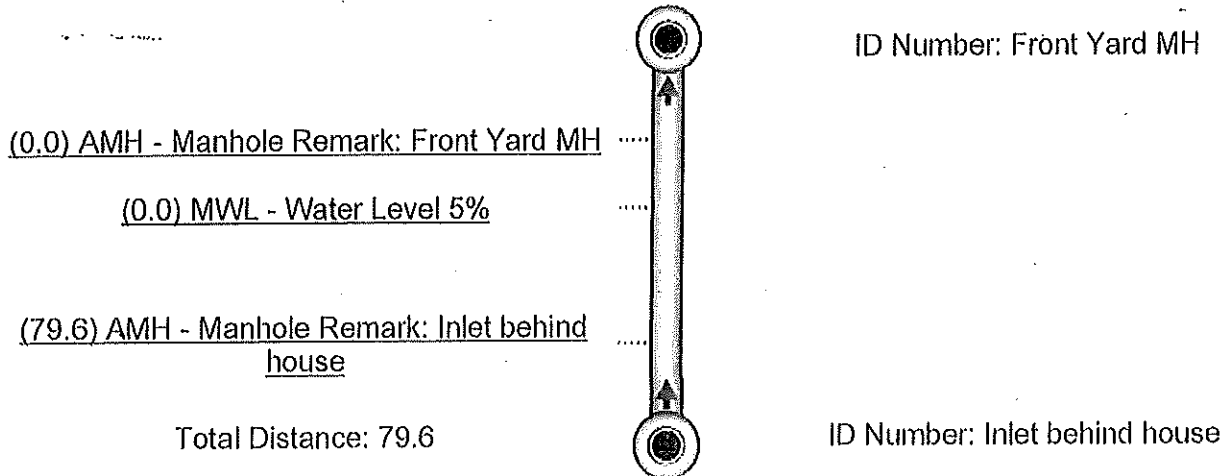
Upstream MH: Inlet behind house

Downstream MH: Front Yard MH

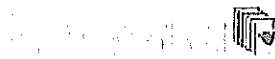
Direction of Survey: Upstream

Material: Reinforced Concrete Pipe

Severity
Light
Moderate
Average
Heavy
Severe



Created with the



report generator [Back](#)

DISTANCE FROM TOP OF GROUND TO INVERT  
IS EST. 18-20 FT. MH COVER IS APPROX.  
2 FT BELOW SURFACE.



**LAW**

ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

April 2, 1997

Lawyers Title Insurance Company  
P.O. Box 27567  
Richmond, Virginia 23261

Attention: Mr. Alexander E. Conlyn

Subject: **Report of Culvert Condition Assessment  
Campen Property, 2605 Sanderson Drive  
Raleigh, North Carolina  
Law Engineering and Environmental Services, Inc.  
Job Number 30720-7-1972**

Dear Mr. Conlyn:

Law Engineering and Environmental Services, Inc. (LAW) has completed the culvert location phase of the proposed culvert condition assessment for the subject property. Our services were provided in accordance with LAW proposal no. RAL30720-7-4281, dated February 5, 1997, as authorized by your acceptance dated February 10, 1997.

The purpose of our assessment was to attempt to determine the potential for future damage due to the presence of a culvert beneath the existing house. Representatives of LAW visited the property and a subcontract surveyor performed a physical topographic survey to locate and observe the condition of the culvert.

#### **PROJECT INFORMATION**

Project information was provided by Mr. Conlyn, including copies of several plot maps showing the property and the approximate location of the creek which is reportedly now contained by the culvert. We understand that the Campen residence was constructed over the storm drain culvert that now carries the creek. There is no present reported damage to the house.

*April 2, 1997*



With your permission we contacted Mr. James Schenck, Esq, the attorney for Mr. Campen, to determine what information he had already obtained about the pipe's location and/or condition. Mr. Schenck reported that Mr. James Keane, an engineer with Stochastic Geotechnics, had previously examined the site and the culvert. Mr. Tice contacted Mr. Keane who stated that he had located a yard inlet that was apparently over the culvert near the rear retaining wall of the Campen property and believed there was another inlet on the Sanderson Drive side of the property that was filled in with soil. Mr. Keane also stated he had crawled into the pipe and found no apparent leaks or breaks. He estimated that the pipe was about 20 feet below ground in the area of the house. Mr. Keane stated he drilled a hand auger boring with dynamic cone penetrometer testing through the fill over the pipe.

Subsequently, Mr. Tice contacted the City of Raleigh Engineering Department, and was informed that no drawings were available concerning the location and/or installation of the culvert.

### **CULVERT LOCATION RESULTS**

On February 21, 1997, Mr. Fred Sharpe of LAW and a survey crew from Greenhorne and O'Mara, Inc. visited the site. Mr. Sharpe verified the location of the drop inlet/catch basin south of the retaining wall and coordinated activities of the survey crew, including interface and permission for site access with the resident, Mrs. Campen.

The survey crew entered the southern drop inlet and traversed the 42 inch reinforced concrete pipe (RCP) to a manhole 82 feet north of the drop inlet. Based on measurements through the culvert, and by use of a magnetic (locator) the survey crew located and subsequently excavated to the manhole cover located approximately 20 feet north of the house. The manhole was covered by approximately 15 inches of relatively well-compacted soil which contained rocks and other miscellaneous debris. The manhole cover could not be removed using available equipment, but was physically located during the associated survey.



*April 2, 1997*



The survey crew located, vertically and horizontally, the drop inlet, manhole, property corners, building corners and other pertinent features on and near the property. A copy of the survey report is attached, including a site location sketch.

The survey report indicates that the 42 inch RCP culvert section between the drop inlet and the manhole was in good condition, with no apparent structural problems. The survey party chief indicated that the culvert contained no evidence of open or leaking joints. The survey report also indicates that the depth of fill over the pipe ranges from approximately 19 to 20 feet below the crawl space beneath the house, and likely is 17 to 18 feet beneath the footing bearing level.

Observations of the ground surface indicated no apparent settlement of the fill over the pipe relative to the surrounding ground surface. Mrs. Campen also indicated that no apparent signs of differential settlement (cracks or separation in walls, sticking doors and windows, etc.) had occurred in the house as of the time of our site visit. Our observations of the exterior of the house, including wood siding and masonry foundation walls, indicated no apparent differential settlement of the structure.

### **ASSESSMENT**

Potential for damage to a structure located above a culvert can arise from settlement of the backfill placed around and over the culvert, erosion and subsequent loss of soil by water leaking out of the culvert joints and flowing outside the culvert, due to downward flow or seepage of water into the culvert through broken or defective joints

From all reports, the culvert has been present for a considerable period of time. Settlement of the culvert backfill due to its own weight would have occurred during the initial few months to a year after the fill was placed and would have resulted in a depressed zone over the culvert. Loss of ground either by erosion out of the culvert or soil flow into the culvert could have

*April 2, 1997*



resulted in voids in the fill that would be present but not sufficiently large to cause a surface depression. However, the culvert joints were observed by the surveyor to be in good condition and alignment, and no soil stains on the joints were observed which indicates there is very low likelihood that soil erosion has occurred.

Concrete culverts are capable of serving for many years without concern for deterioration. The damp atmosphere of a stormwater culvert and its protection through burial from freezing and thawing are conducive to long service life.

The depth of the culvert in relation to the house provides sufficient separation so that the loads imposed on the ground by the house are not transmitted to the culvert.

The absence of any present surface indications of soil settlement, the condition of the culvert, and its depth all indicate there is minimum risk of structural damage to the house posed by the culvert and it is unlikely the risk will change over the next 20 to 40 years.

## **CONCLUSIONS**

Based on our observations and evaluation of the data from the site survey, the culvert beneath the Campen residence is in good condition, with no indication of subsidence of the fill above the pipe, either due to settlement of the pipe or of the fill over the pipe, either from the load of the structure or from the weight of the fill itself.

We have considered reasonable foreseeable circumstances involving the culvert and our assessment indicates that the potential for future damage to the house due to the presence of the 42 inch RCP culvert beneath it is minimal. No information concerning either the culvert or the fill over the culvert was obtained before, during or since our assessment which would indicate the need for further evaluation of the culvert or the fill over it.

Lawyers Title Insurance Company -  
Report of Culvert Condition Assessment  
Campen Property, 2605 Sanderson Drive  
Law Engineering and Environmental Services, Inc.  
Job Number 30720-7-1972


April 2, 1997

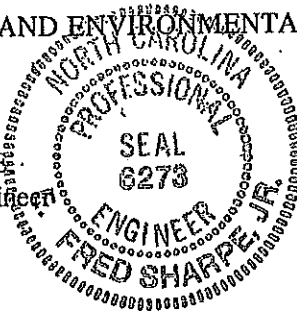



If there are questions concerning this report, or if we may be of further service, please contact us.

Sincerely,

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

  
E. Fred Sharpe, Jr., P.E.  
Principal Materials Engineer  
Registered NC 6273



  
J. Allan Tice, P.E.  
Corporate Geotechnical Consultant  
Assistant Vice President  
Registered NC 6428

BFS/JAT:bis

Attachment: Greenhorne and O'Mara, Inc. Survey Report (3 pages)

cc: James S. Schenck, IV, Esq. - Patton Boggs, L.L.P.  
Donald S. Johnson, Esq. - Johnson & Knight



Engineering  
Planning  
Earth Sciences  
Surveying  
Photogrammetry

**Greenhorne & O'Mara, Inc.**

**Founded in 1950**

5580 CENTERVIEW DRIVE, SUITE 100-BLADEN BLDG.

RALEIGH, N.C. 27606-3389

PHONE 919-851-1919

FAX 919-851-8393

3/5/97

Mr. Fred Sharpe  
Law Engineering  
3301 Atlantic Avenue  
Raleigh, N.C. 27609

Dear Mr. Sharpe:

The results of our survey of the culvert and dwelling located at 2605 Sanderson Drive are shown in the table marked "Attachment A" and a preliminary point map marked "not for recordation, conveyances, or sales" to be used for visual reference only marked "Attachment B".

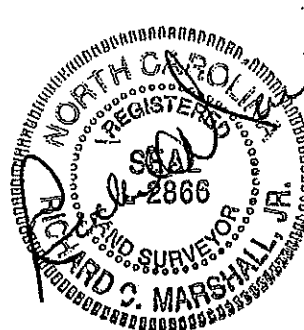
As discussed previously with you and Mr. Al Tice, this is a survey to define the relationships between the points located only. A baseline was established with assumed coordinates between the existing iron pipes at points #1 and #2 and an elevation was assumed at point #1. The north arrow is shown on the sketch for baseline reference only and not to indicate actual north.

The condition of the pipe located between the structures at points #27 and #21 is reported by the onsite personnel to be clean with no apparent structural problems. Also, the dirt over the top of the structure at point #21 contained miscellaneous building debris.

If we can be of any further assistance in this matter please let us know.

Respectfully,

Richard C. Marshall, Jr.  
Survey Division



File 5220001.rpt

Date Prepared: 3/6/97

Page: 1

*Greenhorne & O'Mara, Inc.*

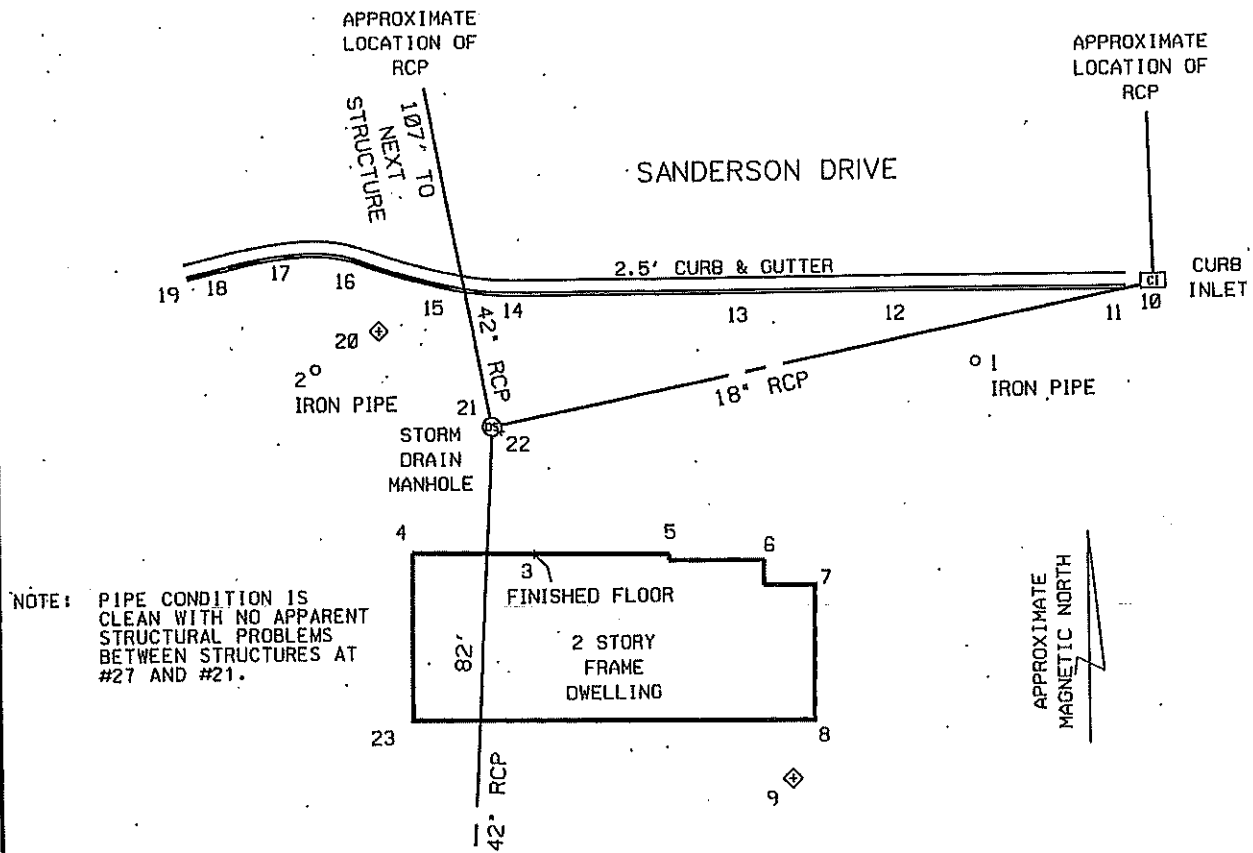
ATTACHMENT A

POINT NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	1,000.00	1,000.00	100.00	PROPERTY CORNER
2	1,000.00	892.86		PROPERTY CORNER
9	933.76	969.44	102.62	SURVEY CONTROL POINT
20	1,006.13	903.22	101.48	SURVEY CONTROL POINT
3	969.90	927.98	104.43	FINISHED FLOOR ELEVATION
			101.43	APROX. CRAWL SPACE ELEVATION
4	970.27	908.20	101.90	GROUND AT HOUSE CORNER
5	969.69	949.94	101.95	GROUND AT HOUSE CORNER
6	968.56	965.24	101.67	GROUND AT HOUSE CORNER
7	964.39	973.41	101.70	GROUND AT HOUSE CORNER
8	942.94	973.11	102.55	GROUND AT HOUSE CORNER
23	943.62	907.95	102.67	GROUND AT HOUSE CORNER
10	1,011.76	1,026.76	99.22	TOP OF CURB AT CURB INLET
			95.33	INVERT OUT, 18" RCP
11	1,011.23	1,024.25	99.20	BACK OF CURB
12	1,011.45	990.98	99.48	BACK OF CURB
13	1,011.45	965.38	100.03	BACK OF CURB
14	1,011.52	925.22	100.77	BACK OF CURB
15	1,012.57	915.26	100.88	BACK OF CURB
16	1,016.77	900.65	101.28	BACK OF CURB
17	1,018.16	891.04	101.44	BACK OF CURB
18	1,015.89	877.69	101.74	BACK OF CURB
19	1,014.60	872.23	101.97	BACK OF CURB
21	990.54	921.33	100.22	TOP OF STORM DRAIN MANHOLE
22	989.71	922.78	101.40	GROUND AT MANHOLE
			93.32	INVERT IN, 18" RCP
			77.27	INVERT IN, 42" RCP
			75.17	INVERT OUT, 42" RCP
24	911.86	1,000.02	103.59	TOP OF BLOCK RETAINING WALL
25	913.62	916.64	102.89	TOP OF BLOCK RETAINING WALL
26	914.57	879.32	103.13	TOP OF BLOCK RETAINING WALL
27	908.27	916.93	93.34	TOP OF STORM DRAIN DROP INLET
			81.49	INVERT OUT, 42" RCP

Date Prepared: 3/5/97

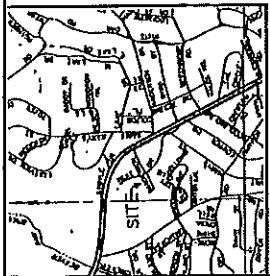
Page 2

## ATTACHMENT B





BOOK 1991 PAGE 946



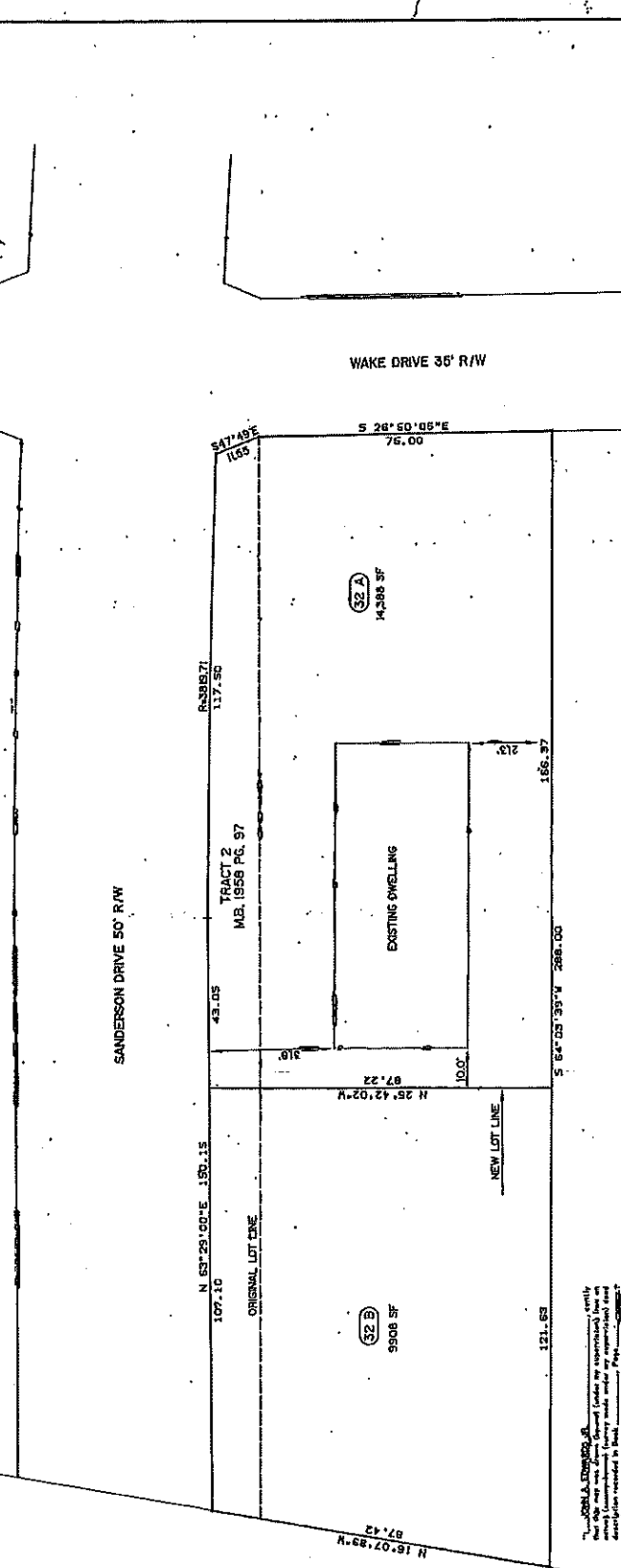
This map is submitted in accordance with the provisions of the North Carolina Subdivision Map Act, Chapter 206, N.C.S.A. The map is submitted for recording and is subject to the provisions of the Act. The map is submitted by the owner of the property, Victoria M. Diab Estate, and is intended to show the boundaries of the property and the location of the existing dwelling. The map is submitted for recording and is subject to the provisions of the Act. The map is submitted by the owner of the property, Victoria M. Diab Estate, and is intended to show the boundaries of the property and the location of the existing dwelling.

NORTH CAROLINA  
COUNTY OF WAKE  
NOTARY PUBLIC  
J. B. BARNES  
My Comm. Expires 12/31/99



THIS PLAT NOT TO BE RECORDED  
AFTER 40 DAY OF 02-29-97  
1. COPY TO BE RETAINED FOR THE  
CITY.  
THIS PLAT IS IN COURT OF THE  
CITY LIMITS.

THIS IS NOT A SUBDIVISION OF A RECOMBINATION  
OF PREVIOUSLY PLATTED PROPERTY.  
DATE 9-20-91  
SIGNED BY VICTORIA M. DIAB ESTATE  
SIGNED BY J. B. BARNES



JOHN A. EDWARDS & COMPANY  
Consulting Engineers  
333 Wade Ave., Raleigh, N. C.  
Phone (919) 828-4428



NORTH CAROLINA  
COUNTY OF WAKE  
NOTARY PUBLIC  
J. B. BARNES  
My Comm. Expires 12/31/99

THE EXISTING DWELLING ON LOT 32A IS CONSIDERED A  
NON-CONFORMING STRUCTURE UNDER THE CITY OF  
RALEIGH ZONING ORDINANCE IN THAT THE REAR YARD  
SETBACK IS LESS THAN THE 30.0 FEET REQUIRED BY THE RALEIGH  
CITY CODE.



TAX MAP 464  
PARCEL 289

DATE GRAPH

1991

RECOMBINATION MAP

RALEIGH, N.C.

OF

PROPERTY OF

VICTORIA M. DIAB ESTATE

RECOMBINATION MAP

RALEIGH, N.C.

OF

PROPERTY OF

VICTORIA M. DIAB ESTATE

RECOMBINATION MAP

RALEIGH, N.C.

OF

PROPERTY OF

VICTORIA M. DIAB ESTATE

RECOMBINATION MAP

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RECOMBINATION MAP

RALEIGH, N.C.

OF

PROPERTY OF

VICTORIA M. DIAB ESTATE

RECOMBINATION MAP

RALEIGH, N.C.

OF

PROPERTY OF

VICTORIA M. DIAB ESTATE

RECOMBINATION MAP

RALEIGH, N.C.

**ADJACENT PROPERTY OWNER**

JAMES E. SCOTT, CATHERINE M. SCOTT  
2515 SANDERSON DR.  
RALEIGH NC 27608-1337

WILLIAM ANSEL GARRETT  
2513 WAKE DR.  
RALEIGH NC 27608-1339

WAKE COUNTY BOARD OF EDUCATION  
1551 ROCK QUARRY ROAD  
RALEIGH, NC 27610-4145

**PROPERTY OWNERS WITHIN 100 FEET OF THE SUBJECT PROPERTY:**

SUSAN G. ELLIS AND FRED RAYMOND ELLIS, JR  
2517 WAKE DR.  
RALEIGH NC 27608-1359

JAMES E. SCOTT AND CATHERINE M. SCOTT  
2515 SANDERSON DR.  
RALEIGH NC 27608-1337

WILLIAM ANSEL GARRETT  
2513 WAKE DR.  
RALEIGH NC 27608-1339

MERLIN HEIRS MEARES  
2511 WAKE DR.  
RALEIGH NC 27608-1339

WAKE COUNTY BOARD OF EDUCATION  
1551 ROCK QUARRY ROAD  
RALEIGH, NC 27610-4145

